

10/055,785

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7/15/04

(PROPOSED AMDT FILED 6/28/04)

Listing of all claims per revised 37 CFR §1.121

1-20. (cancelled)

21. (currently amended) A sensor for measuring a vector component of heat flux comprising:
a thin flat substrate plate of thermally conducting, electrically insulating material;
a thin film thermopile deposited on a surface of said substrate plate ~~with the axis of said thermopile aligned with said vector;~~ and
electrical connections on said thin film thermopile for measuring its voltage, wherein said vector component of heat flux is measured on the axis of said thermopile.

22. The sensor of Claim 21 further comprising a thin flat cover plate of thermally conducting, electrically insulating material covering said thermopile on said substrate plate.

23. The sensor of claim 22 further comprising a solid body; and
means for holding together and imbedding said substrate plate and said cover plate within said solid body.

24. The sensor of claim 23 in which said means for holding together and imbedding said substrate plate and said cover plate within said solid body comprises a threaded plug having a slot for holding said substrate plate and said cover plate together.

25. The sensor of claim 23 in which said means for holding together and imbedding said substrate plate and said cover plate within said solid body comprises a cylindrical plug having a slot for holding said substrate plate and said cover plate together.

26. The sensor of claim 24 in which said slot is formed in the side of said plug.

27. The sensor of claim 25 in which said slot is formed in the side of said plug.

28. (currently amended) The sensor of claim 24 in which said slot is formed in the an end of said plug.

29. (currently amended) The sensor of claim 25 in which said slot is formed in the an end of said plug.

30. The sensor of claim 23 in which the materials of said substrate plate and said cover plate have thermal properties closely matching those of said solid body.

31. The sensor of claim 23 in which the material of said substrate plate and said cover plate is aluminum nitride.

32. The sensor of claim 23 in which said substrate plate and said cover plate are made of metal